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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SRIVASTAVA, KAILASH C

ART UNIT PAPER NUMBER

1651

DATE MAILED: 03/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,215

Applicant(s)

MILLER ET AL.

Examiner

Dr. Kailash C. Srivastava

Art Unit

1651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-36 are pending.

Objection To OATH

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The fifth inventor has not dated the oath. See 37 CFR 1.52(c).

Claim Rejections - 35 U.S.C. § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claims 1-34 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 1-34 as written are very confusing, difficult to understand and thus indefinite. Applicants are requested to clearly, concisely and succinctly rewrite the claims in such a manner that the claims clearly indicate the applicants' invention.
- The phrase "a liquid foamer product" in Claims 1-3 and 18 renders those claims indefinite because it is not clear what is meant by the phrase "a liquid foamer product". The metes and bounds for the said phrase are not defined. The phrase does not clarify the form in which the product is? A liquid, or foam, or the liquid transforms into foam when certain treatment is given to the liquid? Applicants may have defined the phrase "a liquid foamer product" in the specification and even though claims are read in the context of specification, applicants are advised to clarify/define in the claims, the phrase "a liquid foamer product" giving all the steps that are needed to obtain said "a liquid foamer product".

- The phrase "aqueous liquid hydrolyzed grain protein" in Claims 1-3, 13 and 18 and the phrase "liquid hydrolyzed grain protein" in Claims 10-12 and 27-30 is confusing and therefore, renders those claims indefinite. The metes and bounds for said phrase are not defined. Do these phrase represent the proteins that have been removed from the grain by some solubilizing step and further the water soluble proteins have been separated from the proteins that are soluble in some solvent other than water? Applicants may have defined phrases "aqueous liquid hydrolyzed grain protein" and "liquid hydrolyzed grain protein" in the specification and even though claims are read in the context of specification, applicants are advised to clarify/define in the claims, the phrases "aqueous liquid hydrolyzed grain protein" and "liquid hydrolyzed grain protein" giving all the steps that are needed to obtain said "aqueous liquid hydrolyzed grain protein" and "liquid hydrolyzed grain protein".
- The phrase "initially solid hydrolyzed grain protein" in Claims 1, 14-15, 17-18, 31-32 and 34 is confusing and therefore, renders those claims indefinite. The metes and bounds for the said phrase are not defined. Does this phrase mean the total protein present in the grain before the hydrolysis of the grain or the proteins that are left in the grain after the grain proteins are hydrolyzed and the aqueous soluble proteins have been removed by a separating step from the other components of the grain? Applicants may have defined the phrase "initially solid hydrolyzed grain protein" in the specification and even though claims are read in the context of specification, applicants are advised to clarify/define the phrase "initially solid hydrolyzed grain protein" in claims giving all the steps that are needed to obtain "initially solid hydrolyzed grain protein".
- In Claims 10-13 and 27-30, the limitation, "said liquid hydrolyzed grain protein" is recited. There is insufficient antecedent basis for that limitation in those claims, because in Claim 1 from which Claims 10-13 and in Claim 18 from which Claims 27-30 depend, the phrase "aqueous liquid hydrolyzed grain protein" is recited.
- In Claims 16 and 33, the limitation, "initial shaker foam test height" is recited. There is insufficient antecedent basis for that limitation in those

claims, because in Claim 1 from which Claim 16 and in Claim 18 from which Claim 33 depends the parameter "initial shaker foam test height" is not recited.

- In Claims 35 and 36, the limitation, "foamer product" is recited. There is insufficient antecedent basis for that limitation in those claims, because in Claim 1 from which Claims 35 and 36 depend "foamer product" is not recited. In Claim 1, the recitation is "a liquid foamer product".

All other claims depend directly from the rejected claims and are, therefore, also rejected under 35 U.S.C. §112, second paragraph for the reasons set forth above.

Claim Rejections – 35 U.S.C. § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 8-10, 12-15, 18-22, 25-27 and 29-32 are rejected under 35 U.S.C. §102(b) as anticipated by Gunther (U.S. Patent 3,814,816).

Claims recite a liquid foamer product and a method to make said foamer product, wherein said foamer product is comprised of aqueous and solid hydrolyzed grain protein with protein content by weight of 78-85%, pH in the range of 3-6, an ash content by weight of up to 2.5% and the grain protein is one among: corn gluten, jojoba, oat, rice, soy, wheat gluten or mixtures thereof.

Gunther discloses a foamer product and a method to make said foamer product with soy protein hydrolyzate, wherein, the soy protein has been extracted with an alkaline aqueous solution, hydrolyzed with an alkaline or acidic solution and further modified with a step of enzyme hydrolysis and separated either as liquid or a dry powder and the final product has a pH in the range of 3-5.5 (Column 1, Line 64 to Column 2, Line 8 and Column 8, Lines 25-35). Said foam product has a protein content of up to 81% and ash content of 14% (Column 5, Lines 70-75). Please note that the pH and protein composition of the foam product comprising hydrolyzed soy protein disclosed in the prior art reference is within the range that is claimed in the instantly claimed invention for those components. Moreover, the

ash content covers the range that is claimed in the instant invention. Thus, the prior art reference inherently discloses the composition claimed in the instantly claimed invention.

Therefore, the reference deems to anticipate the cited claims.

Claim Rejections - 35 U.S.C. § 103

7. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

9. Claims 1-34 are rejected under 35 U.S.C. § 103 (a) as obvious over Gunther (U.S. Patent 3,814,816) in view of Gibson et al (U. S. Patent 4,390,450).

Claims recite a liquid foamer product and a method to make said foamer product, wherein said foamer product is comprised of aqueous and solid hydrolyzed grain protein with protein content by weight of 78-85%, pH in the range of 3-6, an ash content by weight of up to 2.5% and the grain protein is one among: corn gluten, jojoba, oat, rice, soy, wheat gluten or mixtures thereof. Said foamer product has a solid content in range of 15-25% and an initial shaker foam test height of at least 140 ml and final shaker foam height that is 70% that of the initial shaker foam height.

Teachings from Gunther have already been discussed *supra*.

Gunther, however, does not disclose the solid content of the foam product or the shaker foam test height of the product obtained.

Gibson et al. teach production of a proteinaceous foam composition comprising one proteinaceous foaming component among vegetable seed protein hydrolysate (e.g., soy protein) or animal proteins, calcium and zinc ions and a solid content in the range of 37-

38%. Said composition has at least 50% protein on weight basis, a pH in the range of 5-5.6 and less than 19% ash (Column 8, Lines 30-62; Column 13, Lines Line 5). Please note that the pH of said composition is within the range of the pH recited in the claimed invention. In addition, Gibson et al. also disclose methods to evaluate the efficiency of foam formation in terms of foam density (e.g., Column 12, Lines30-37). Please note that Gibson et al. disclose a method to quantify foam and since Gibson et al. disclose a foamer product composition comprised of the same components, wherein said composition is prepared according to the similar steps as recited in the instantly claimed invention, Gibson et al. intrinsically disclose initial and final shaker foam height.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Gunther's liquid foamer product and method of making said product by incorporating the beneficial teachings from Gibson et al., because both Gunther and Gibson et al. disclose a foamer product prepared from liquid hydrolyzed grain protein, wherein said composition has a pH in the range of 3-5.5 (Column 1, Line 64 to Column 2, Line 8 and Column 8, Lines25-35), protein content of up to 81% and ash content of 14% (Column 5, Lines 70-75). Gibson et al. remedy the deficiency in Gunther's composition and method by measuring the solid content of said foam product and also foam density (Column 8, Lines 30-62; Column 13, Lines Line 5 and Column 12, Lines30-37). Please note that since the prior art references disclose the composition and production of same product (i.e., a foamer/foam product) comprised of same components (i.e., hydrolyzed aqueous or water soluble grain protein) having similar pH, protein and ash content as is claimed in the instantly claimed invention, intrinsically the cited references disclose the same initial and final shaker foam test heights as is claimed in the instant invention, i.e., the product claimed in the Examiner-cited prior art intrinsically has the same functional property as claimed in the instant invention.

One having ordinary skill in the art would have been motivated to modify Günther's foamer product according to the beneficial teachings from Gibson et al. by incorporating Gibson et al's method to determine the total solid content of the foamer composition because both Gunther and Gibson et al., references teach that their foamer product is made from hydrolyzed grain protein (i. e., soy protein)

None of the prior art references cited above teach exactly the same dimensions/ working conditions for different parameters of the foamer product. However, the adjustment of particular conventional working conditions (e.g., pH, concentration of different

components in weight percent, methods to quantify or characterize foam, protein concentration or the total solids content) is deemed merely a matter of judicious selection and routine optimization, which is well within the purview of the skilled artisan.

From the teachings of the cited references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

10. Claims 1-36 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Gunther (U.S. Patent 3,814,816) in view of Gibson et al (U. S. Patent 4,390,450) and further in view of Keiner (U.S. Patent 3972,998).

Also claimed is a personal care product comprising 3-10% of the claimed foam product composition discussed *supra*.

Teachings of Gunther and Gibson et al. are relied upon for the reasons set forth above. None of these references expressly teach a personal care product comprising 3-10% foamer product.

Keiner beneficially discloses a hair cosmetic composition comprising among other additives, protein hydrolyzates, foam improvers and stabilizers (Column 3, Lines 59-64). Said composition comprises said additives in an amount up to 6% by weight of the hair cosmetic composition (Column 3, Lines 45-46). Please note that an amount of 5-6% by weight is within the range of 3 to 10%. Thus, Keiner intrinsically discloses a hair cosmetic composition comprising the same quantity of a foam product/protein hydrolyzate as is claimed in the instantly claimed invention.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the composition and methods of Gunther and Gibson et al. according to the teachings of Keiner. Thus, Keiner remedies the deficiency of applying the foamer composition to a personal care product in the teachings of Gunther and Gibson et al.

Since each one of the cited prior art references teach a composition comprising ingredients that are common to each one of the compositions (e.g., foam product or protein hydrolyzate), an artisan of ordinary skill would be motivated to combine the teachings from

each one of the cited references to obtain a foamer product and a personal care composition comprising a solid/an aqueous liquid foamer product comprised of a grain protein hydrolyzate having a total solids content of 25 weight %, protein content of up to 80 weight%, ash content of 14-19 wt % and a pH in the range of 5-5.6 and a method to prepare such a composition. The adjustment of particular conventional working conditions (e.g., the quantities of each one of components, actual pH and type of grain protein hydrolyzate (e.g., corn gluten, jojoba, oat, rice, soy, wheat gluten or mixtures thereof), type of personal care product) is deemed merely a matter of judicious selection and routine optimization which is well within the purview of the skilled artisan.

From the teachings of the references cited *supra*, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

11. Applicants are also advised that claims 18-34 in the instant invention are product-by-process claims. As such, product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. According to MPEP§2113, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (Citations omitted). In instant invention, foam products made from hydrolyzed grain protein (e.g., soy protein) are well documented in the prior art.

Conclusion

12. No Claims are allowed.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (703) 605-1196. The examiner can normally be reached on Monday-Thursday from 7:30 A.M. to 6:00 P. M. (Eastern Standard Time or Eastern Daylight Saving Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743 Monday through

Thursday. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Kailash C. Srivastava, Ph.D.
Patent Examiner
Art Unit 1651
(703) 605-1196

March 18, 2003



CHRISTOPHER R. TATE
PRIMARY EXAMINER